

## Supplementary Material for:

### *Effect of the Presence of Iodide on the Electron Injection Dynamics of Dye-Sensitized TiO<sub>2</sub>-Based Solar Cells*

Amanda L. Smeigh,<sup>†</sup> Jordan E. Katz,<sup>‡</sup> Bruce S. Brunschwig,<sup>\*‡§</sup>

Nathan S. Lewis,<sup>\*‡</sup> and James K. McCusker<sup>\*†</sup>

*Contribution from the Department of Chemistry,*

*Michigan State University, East Lansing, MI 48824*

*and the Division of Chemistry and Chemical Engineering,*

*Kavli Nanoscience Institute,*

*and the Molecular Materials Research Center of the Beckman Institute,*

*California Institute of Technology, Pasadena, CA 91125*

**Figure S1.** Time-resolved absorption data at  $\lambda_{\text{probe}} = 700$  nm (a) and  $\lambda_{\text{probe}} = 800$  nm (b) for TiO<sub>2</sub> films sensitized with the N3 chromophore in contact with CH<sub>3</sub>CN solutions containing 0.5 M LiI/0.05 M CH<sub>3</sub>CO<sub>2</sub>H/0.04 M I<sub>2</sub> (green circles) and 0.5 M LiI/0.05 M CH<sub>3</sub>CO<sub>2</sub>H (yellow circles). The data were acquired following ~100 fs excitation at 530 nm. The solid lines correspond to fits to exponential kinetic models. See text for further details.

**Figure S2.** Time-resolved absorption data at  $\lambda_{\text{probe}} = 700$  nm (a) and  $\lambda_{\text{probe}} = 800$  nm (b) for TiO<sub>2</sub> films sensitized with the N3 chromophore in contact with CH<sub>3</sub>CN solutions

containing 0.5 M TBAI/0.04 M  $I_2$  (green circles) and 0.5 M TBAI (yellow circles). The data were acquired following  $\sim 100$  fs excitation at 530 nm.

Figure S1

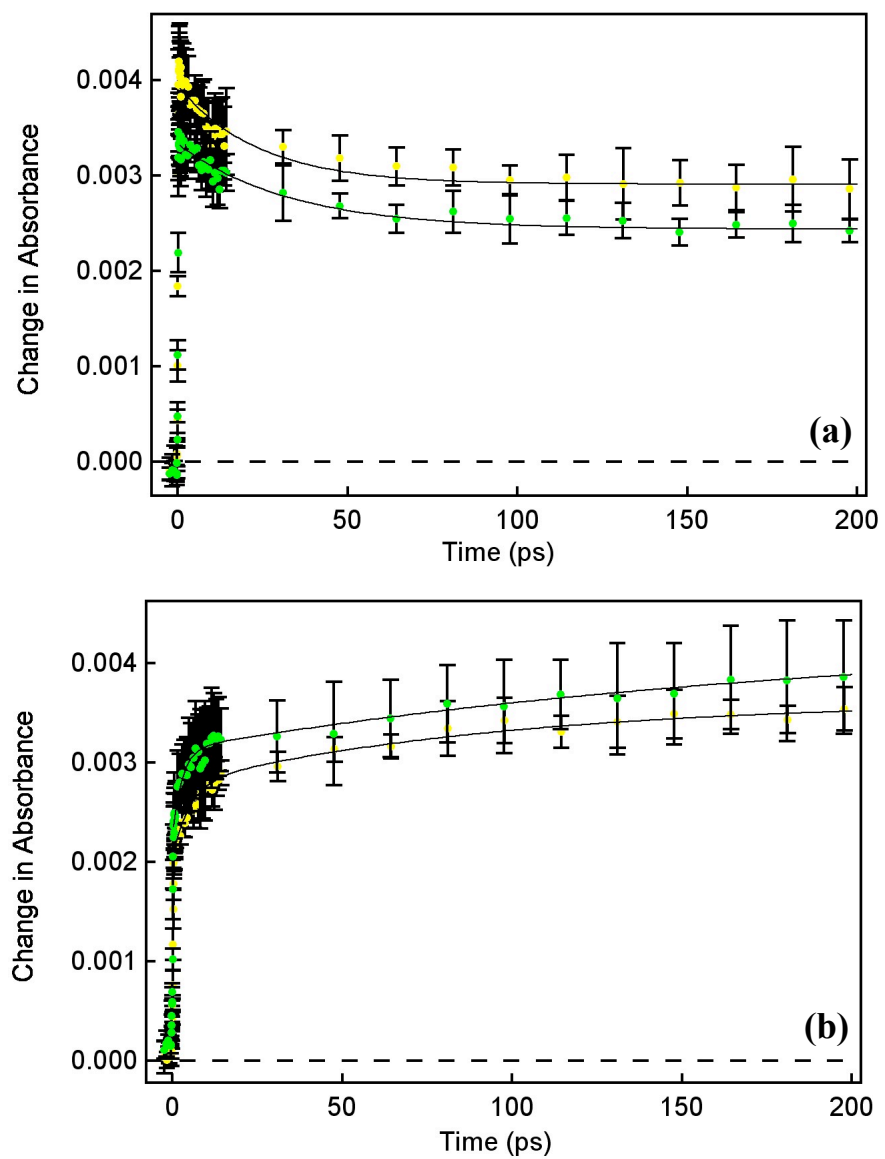


Figure S2

